

## THE CLAIMS

- 1 1. An osteosynthetic device, in particular an intramedullary nail, having a longitudinal  
2 shape with a central axis, a first end, and a second end, wherein the shape of the device is  
3 helical.
- 1 2. The osteosynthetic device of claim 1, wherein the envelope of the helix is a cylinder  
2 having the same central axis as the helix.
- 1 3. The osteosynthetic device of claim 1, wherein the helix has a rotation of less than  
2 540°, preferably less than 360°.
- 1 4. The osteosynthetic device of claim 1, wherein the radius of the cylinder is in the range  
2 of 10 to 50 mm, preferably in the range of 15 to 30 mm.
- 1 5. The osteosynthetic device of claim 1, wherein the pitch of the helix is in the range of  
2 100 to 1500 mm, preferably in the range of 300 to 1000 mm.
- 1 6. The osteosynthetic device of claim 1, wherein the pitch of the helix is greater than 400  
2 mm, preferably larger than 600 mm.
- 1 7. The osteosynthetic device of claim 1, wherein the cross-section orthogonal to the  
2 central axis of the helix is a circle.
- 1 8. The osteosynthetic device of claim 1, wherein the cross-section orthogonal to the  
2 central axis of the helix is a square or a star.
- 1 9. The osteosynthetic device of claim 1, wherein the second end is pointed.
- 1 10. The osteosynthetic device of claim 1, wherein the cross-section orthogonal to the  
2 central axis of the helix is essentially a rectangle with the sides a and b, the larger side b  
3 being oriented to the outer and inner sides of the helix.

- 1 11. The osteosynthetic device of claim 10, wherein the ratio of a:b is smaller than 0.5,  
2 preferably smaller than 0.35.
- 1 12. The osteosynthetic device of claim 10, wherein the essentially rectangular cross-  
2 section is rounded at its smaller sides a.
- 1 13. The osteosynthetic device of claim 1, wherein the portion of the helix near the first  
2 end is thicker than the portion of the helix near the second end.
- 1 14. The osteosynthetic device of claim 1, wherein the central axis of the helix is a straight  
2 line.
- 1 15. The osteosynthetic device of claim 1, wherein the cross-section orthogonal to the  
2 central axis has a maximum dimension in the range of 5 to 14 mm, preferably in the range of  
3 7 to 11 mm.
- 1 16. The osteosynthetic device of claim 1, wherein the length of the cylinder or of the helix  
2 is in the range of 200 to 500 mm, preferably in the range of 250 mm to 400 mm.
- 1 17. The osteosynthetic device of claim 1, wherein the device is provided with through  
2 holes for locking screws, preferably near the second end.
- 1 18. The osteosynthetic device of claim 1, wherein the device is provides with at least two,  
2 preferably with at least three through holes for locking screws.